

Attachment A



2010 Stormwater Management Program (SWMP)

**City of Burien
Department of Public Works
400 SW 152nd St., Suite 30
Burien, WA 98166**

March 15, 2010

City of Burien

2010 Stormwater Management Plan (SWMP)

Background

This plan, the Stormwater Management Plan (SWMP) is required by the Western Washington Phase II NPDES Municipal Stormwater Permit. The Permit was issued by the State Department of Ecology to the City of Burien on January 17, 2007 and became effective on February 16, 2007. It provides general guidelines, procedures and regulations to support an effort to preserve, protect and improve the State's water resources.

It is intended to reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Permit and SWMP-related components are intended to support these goals and are required to be implemented by the specific dates provided in the permit. On June 17, 2009, the Washington State Department of Ecology (Ecology) modified the municipal stormwater permits to address the settlement agreements and the Pollution Control Hearings Board (PCHB) orders as they apply to each NPDES permit. The effective date for the permit modifications was July 17, 2009. Full SWMP implementation by the City of Burien is required within five years from the effective permit date.

The permit expires on February 15, 2012. The SWMP is available on the City's website at <http://www.burienwa.gov/index.aspx?nid=228>

This document will be updated annually to reflect those items that have been implemented during the previous year in response to permit target dates. Implementation of some component items has begun. Components that are still under development will generally list the requirements and include the date by which they must be completed in bold letters. Notes included with the listed requirements are intended to clarify City progress, or to indicate possible future implementation intentions.

The SWMP should be viewed as a "working draft" as it appears here and in later annual updates. The updated documents will continue to be available for review and comment on the City of Burien Stormwater website. The final SWMP will be provided near the end of the fifth year of the permit cycle.

Questions, suggestions and comments on the National Pollution Discharge Elimination System (NPDES) permit or SWMP development can be directed to Heungkook Lim, PE, at (206) 248-5516.

Discussion

The Permit identifies five major components of the SWMP:

1. Public Education and Outreach.
2. Public Involvement and Participation.
3. Illicit Discharge Detection/Elimination
4. Controlling Runoff for new and redevelopment construction sites.
5. Pollution Prevention for Operations and Maintenance for Municipal Operations.

A general description of these components, followed by a detailed listing of related requirements, is provided in the following. The City of Burien is responsible for implementing Permit requirements by the specified target dates, and updating the SWMP to reflect this implementation. Current component and item status are briefly addressed with notes generally following the appropriate requirement listings. This document constitutes the City of Burien's SWMP and will be revised and formalized as the implementation progresses.

1. PUBLIC EDUCATION AND OUTREACH

This section describes the permit requirements, current City activities, and planned actions. The education program may be developed locally or regionally. **No later than two years** after the effective date of the Permit, the City shall provide an education and outreach program for the area served by the municipal separate storm sewer systems (MS4).

1.1 Permit Requirements

The Permit (Section S5 C.1) requires the City to:

- Develop an education and outreach program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees. The goal of the education program is to reduce and eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Develop the method to measure the understanding and adoption of the target behaviors among the targeted audiences. The resulting measurement shall be used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of targeted behaviors.
- Document and maintain records of stormwater public education and outreach activities.

1.2 Current Activities

Current City of Burien activities include:

- Natural yard care and garden program.

- Storm drain stenciling program.
- Car wash program.
- Miller and Walker Creek Basin Stewardship program.
- Have Erosion and Sediment Control (ESC) brochure available for small construction sites.
- Distribute Low Impact Development (LID) information to targeted audiences.
- Post allowable and prohibited discharge information on the City's website.
- Post residential car wash information on the City's website.
- Post Puget Sound Starts Here link information on the City's website.
- Have stormwater public information in quarterly City newsletter.
- Water quality audit program assisted by King County.
- Post hotline number on the City's website for illicit discharge and hazardous material/oil spill reports.
- City staff is actively participated in the *STORM Group* (the Regional NPDES Education and Outreach Forum) and *Puget Sound Starts Here* campaign. (<http://www.pugetsoundstartshere.org/>)
- Document and maintain the information of public education/outreach activities.
- Measure the understanding and adoption of the targeted behaviors.

1.3 Planned Actions

- Continue to distribute appropriate information to targeted audiences.
- Continue to keep tracking costs of development and implementation of the SWMP.
- Continue to develop and implement educational materials and survey mechanisms for targeted audiences.
- Continue to develop a system to track and maintain the records of public education/outreach activities.
- Continue to have the water quality audit program assisted by King County and conducted by City staff.
- Continue to document and maintain the information of public education/outreach activities.
- Continue to measure the understanding and adoption of the targeted behaviors.

2. PUBLIC INVOLVEMENT AND PARTICIPATION

This section describes the permit requirements, current City activities, and planned actions. **No later than one year** from the effective date of this Permit, all cities shall create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the Permittee's entire SWMP. Each city shall develop and implement a process for consideration of public comments on their SWMP.

2.1 Permit Requirements

The Permit (Section S5 C.2) requires the City to:

- Create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the City's entire SWMP. The City shall develop and implement a process for consideration of public comments on their SWMP.
- Make their SWMP, the annual report required under S9.A of *Western Washington Phase II Municipal Stormwater Permit*, and all other submittals required by this Permit, available to the public. The annual report, and SWMP that was submitted with the latest annual report, shall be posted on the City's website.

2.2 Current Activities

- The City has been posting the latest version of the SWMP on City website.
- The City has accepted and reviewed public comments.
- The City has participated in basin plan efforts as active members.
- The City has notified the public through the Basin Stewardship program.

2.3 Planned actions:

- The City will continue to accept and review public comments.
- The City will continue to publish public comments on the City's website.
- The City will continue to post the latest SWMP, annual NPDES report.
- The City will continue to post all other permit submittals on the City's website, and make them available at the City Hall.

3. ILLICIT DISCHARGE DETECTION/ELIMINATION

This section describes the permit requirements, current City activities, and planned actions related to Illicit Discharge Detection and Elimination (IDDE). The City shall fully implement an ongoing illicit discharge detection and elimination program **no later than 180 days** prior to the expiration date of this Permit.

3.1 Permit Requirements

The Permit (Section S5 C.3) requires the City to:

- Develop and periodically update stormwater maps, including all known stormwater outfalls, receiving water, and structural stormwater BMPs owned, operated, or maintained by the City.
- Identify the areas where there are no discharge stormwater to surface water.
- Make the stormwater map available to Ecology or upon request.
- Develop and implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater illegal discharges, and/or dumping into the City's stormwater system.
- Develop and implement an ongoing program to detect and remove non-stormwater discharges, spills, illicit connections and illegal dumping into the City's stormwater system.
- Inform other public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
- Adopt and implement procedures for program evaluation and assessment, including tracking the number and type of spills or illicit discharges identified, inspections made, and any feedback received from public education efforts.
- Provide appropriate training for City employees for reporting of illicit discharges.
- Publicize a hotline or other local telephone number for reporting of spills or other illicit discharge.
- Document and maintain illicit discharge reports and action taken.

3.2 Current Activities

- The City has updated GIS stormwater map from existing as-built drawings and from new and re-development projects that have either privately and publicly owned stormwater facilities.
- A GIS Stormwater Map is available on the City's website and upon request from the public.
- The hotline number for spill and illicit discharge is publicized on the City's website.

- The City has performed field inspections and kept the records for illicit discharges and connections with the technical assistance from the King County and DOE.
- The City has the Water Quality Audit program assisted by King County.
- Has adopted SWM ordinance to address Illicit Connection (IC) and Illicit Discharge Detection and Elimination (IDDE). The ordinance includes list of allowable and prohibited discharges to the City's drainage system or streams.
- The City has developed an enforcement strategy and the SWM ordinance includes escalating enforcement procedures and actions.
- The City has provided IC/IDDE trainings to City staff for IC/IDDE on identification and reporting of the illicit discharges.
- Follow up training has been provided to City staff, as needed, to address changes in procedures or requirements
- The City has prioritized receiving waters for visual inspection. The evaluation was based on the sub basins delineated by King County and City, which are, Miller Creek basin, Walker Creek basin, Salmon Creek basin, and Puget Sound Sub basin.
- The City has kept records for drainage complaints, spills, and IC/IDDE.

3.3 Planned Actions

- Continue to develop a stormwater GIS map of both public and privately-owned facilities.
- Develop procedures for locating priority areas likely to have illicit discharges, spills, complaints, or large quantities of materials that could result in spills.
- Continue to develop a stormwater GIS map that shows all outfalls with a 24- inch nominal diameter or larger, or an equivalent cross-section area for non-pipe systems and include tributary conveyances associated drainage areas and land use.
- Continue to provide training opportunities to City Staff for IC/IDDE and to keep training records.
- Continue to track number and type of spills and IC/IDDE.
- Continue to develop and implement an ongoing training program on the proper procedures for reporting and responding to illicit discharge/connections.
- Field assessments of three high priority water bodies.
- Develop procedures for tracing and removing the source of an illicit discharge including visual inspections.

- Inform the IC/IDDE and improper disposal of waste to public employees, businesses, and the general public.

4. CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT AND CONSTRUCTION SITES

This section describes the permit requirements, current activities, and planned actions related to controlling runoff from new development, redevelopment, and construction sites. The ordinance or other enforceable mechanism shall be in place **no later than February 16, 2010**. The program shall be applied to all sites that disturb a land area of one acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. The program shall apply to private or public development, including roads. The technical thresholds in Appendix 1 of *Western Washington Phase II Municipal Stormwater Permit* shall be applied to all sites one acre or greater, including projects less than acre that are part of a larger common plan of the development or sale.

4.1 Permit Requirements

Section S5 C.4 requires the City to:

- Develop, implement, and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities.
- Adopt an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects.
- Establish a permitting process with plan review, inspection, and enforcement capacity to meet standards listed in (i) through (iv) of section S5 C.4b.
- Include provisions to verify adequate long-term operation and maintenance (O&M) of post-construction stormwater facilities and BMPs that are permitted and constructed pursuant to section S5 C.4c, which shall include requirements listed in (i) through (iv).
- Establish a procedure for keeping inspection records and enforcement actions by staff, including inspection reports, warning letters, notices of violation, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained.
- Keep records of all construction projects disturbing more than one acre, and all projects of any size that are part of a common plan of development or sale that is greater than one acre that are approved after the effective date of this Permit.
- Make available copies of the “Notice of Intent for Construction Activity” and copies of the “Notice of Intent for Industrial Activity” to representatives of proposed new development and redevelopment. The City will continue to enforce local ordinances

controlling runoff from sites that are also covered by stormwater permits issued by Ecology.

- Verify that all staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections and enforcement, are trained to conduct these activities.
- Follow-up training, as needed, to address changes in procedures, techniques or staffing.
- Document and maintain training records of all City employees

4.2 Current Activities

- The City has adopted the *2009 King County Surface Water Design Manual (KCSWDM)* to guide stormwater management from new development and redevelopment projects.
- The adopted *2009 King County Surface Water Design Manual* includes stormwater maintenance standards and requirements that are equivalent to the *Washington State Department of Ecology's 2005 Stormwater Manual*.
- The City has conducted site inspections for new development and redevelopment projects that disturb a land area one acre or greater, including project less than one acre that are part of a larger common plan of the development
- The City supports Low Impact Development (LID) techniques for the City projects and private developments. The City revised its SWM ordinance in February 2010 to allow LID techniques.
- The Erosion and Sediment Control (ESC) brochure for small project site has been created and is available to the public.
- The City has conducted site inspections for City-owned new drainage facilities, and documents and maintains all records
- The City purchased Cityworks, a Stormwater Asset Management system. The City is using the system to keep records of drainage inspections and maintenance, create work tickets, and to track cost and time.
- The City has provided training to City staff who are responsible for implementing the program to control runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspection, and enforcement.

- The City has documented and maintained records for all training.
- The City has provided certified Erosion and Sediment Control (ESC) training to relevant City staff.
- The City has applied the Technical Thresholds in Appendix 1 to all sites one acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale
- The City has adopted an Ordinance to address run-off from new development, redevelopment and construction site activities. The Ordinance includes the minimum requirements, technical thresholds, and definitions in Appendix 1 (or an equivalent approved by Ecology under the NPDES Phase I Municipal Stormwater Permit) for new development, redevelopment, and construction sites.
- The adopted SWM Ordinance and the KCSWDM include a site planning process, BMP selection, and design criteria that reduce the discharge of pollutions to the maximum extent practicable.
- The City has adopted an Ordinance or other enforceable mechanism that provides the legal authority, through the approval process for new development, to inspect private stormwater facilities that discharge to the City
- The City SWM Ordinance allows non-structural preventive actions and source reduction approaches, such as Low Impact Development (LID) Techniques, to minimize the creation of impervious surface and the disturbance of native soils and vegetation.
- The City has developed and implemented a permitting process to address runoff from new development, redevelopment and construction site activities with plan review, inspection, and enforcement capability.
- The City has applied permitting process to all sites that disturb a land area of one acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale.
- The City has reviewed and maintained the review records of **Stormwater Site Plans** for new development and redevelopment projects
- The City has inspected and maintained the inspection records, prior to clearing and construction, of all known development sites that have a high potential for sediment transport as determined through plan review.
- The City has been implementing a program designed to annually inspect and maintain all City-owned or operated permanent stormwater treatment and flow control facilities.

- The City has provided copies of the “Notice of Intent for Construction Activity” and “Notice of Intent for industrial Activity” to representatives of proposed new development and redevelopment
- The City has implemented a program designed to annually inspect all stormwater treatment and flow control facilities (other than catch basins) permitted by the City, unless there are maintenance records to justify a different frequency. If using reduced inspection frequency, attached documentation is required.
- The City has inspected new stormwater treatment and flow control facilities privately owned or operated to identify maintenance needs and enforce compliance with maintenance standards as needed.
- The City has implemented a procedure for keeping inspection records and enforcement actions by staff, including inspection reports, warning letters, notices of violation, and other enforcement records, maintenance inspections and maintenance activities.
- The City Ordinance identifies the party responsible for maintenance, requires inspection of facilities and establishes enforcement procedures.
- The City Ordinance includes an enforcement strategy to respond to issues of non-compliance with regulations for qualifying projects.
- The City has developed and implemented a long-term operation and maintenance (O&M) program for post-construction stormwater facilities and BMPs.
- The City has inspected and maintained the records of post-construction stormwater controls, including structural BMPs, at new development and redevelopment projects.
- The City has established maintenance standards that are as or more protective of facility function than those specified in KCSWDM.

4.3 Planned Actions

- The City will continue to develop, implement and enforce a program to reduce pollutants in stormwater runoff to the City’s stormwater system from new development and redevelopment, and construction site activities.
- The City will continue to apply stormwater runoff program to all sites that disturb a land area one acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale.

- The City will continue to apply stormwater runoff program to private and public development, including roads.
- The City will continue to inspect and keep track of the inspection records of construction-phase stormwater controls at all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls.
- The City will continue to enforce and keep track of the enforcement records as necessary based on the inspection at new development and redevelopment projects.
- The City will continue to inspect and keep track of the inspection records of qualifying permitted development site upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater control such as stormwater facilities and structural BMPs.
- The City will continue to verify and keep track of verification records that a maintenance plan is completed and responsibility for maintenance is assigned for qualifying projects.
- The City will continue to enforce regulations and keep track of the enforcement records as necessary based on the inspections.
- The City will continue to perform timely maintenance.
- The City will continue to keep track of all City employees training records for implement the program to control runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement.

5. POLLUTION PREVENTION AND OPERATION AND MAINTENANCE FOR MUNICIPAL OPERATIONS

This section describes the permit requirements, current activities, and planned actions related to pollution prevention and operation and maintenance for municipal operations. **Within three years** of the effective date of this Permit, each City shall develop and implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

5.1 Permit Requirements

Section S5 C.5 requires the City to:

- Develop and implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

- Establish and develop maintenance standards that are as protective, or more protective, of facility function than those specified in *2005 Stormwater Management Manual for Western Washington*.
- Perform annual inspection of all municipally owned or operated permanent stormwater treatment and flow control facilities, other than catch basins, and taking appropriate maintenance actions in accordance with the adopted maintenance standards. The annual inspection requirement may be reduced based on inspection records.
- Spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major (greater than 24-hour-10-year recurrence interval rainfall) storm events. If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections.
- Inspect all catch basins and inlets owned or operated by the City at least once before the end of the Permit term. Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the *2005 Stormwater Management Manual for Western Washington*. Decanted water shall be disposed of in accordance with Appendix 6 *Street Waste Disposal*.
- Established compliance with the inspection requirements listed in (b), (c), and (d) of *Western Washington Phase II Municipal Stormwater Permit* shall be determined by the presence of an established inspection program designed to inspect all sites and achieving inspection of 95% of all sites.
- Establish and implement practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City, and road maintenance activities conducted by the City. The activities shall include: pipe and culvert cleaning, ditch maintenance, street cleaning, road repair and resurfacing, snow and ice control, utility installation, pavement striping maintenance, maintenance roadside areas, and dust control.
- Establish and implement policies and procedures to reduce pollutants in discharges from all lands owned or maintained by the City and subject to this Permit, including but not limited to: parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control facilities. These policies and procedures shall address, but are not limited to: application of fertilizer, pesticides, and herbicides, sediment and erosion control, landscape maintenance and vegetation disposal, trash management, and building exterior cleaning and maintenance.
- Develop and implement an on-going training program for employees of the City whose construction, operations or maintenance job functions may impact stormwater

quality. The training program shall address the importance of protecting water quality, the requirements of this Permit, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up training shall be provided as needed to address changes in procedures, techniques or requirements. The City shall document and maintain records of training provided.

- Develop and implement of a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City in areas subject to this Permit that are not required to have coverage under the Industrial Stormwater General Permit. Implementation of non-structural BMPs shall begin immediately after the pollution prevention plan is developed. A schedule for implementation of structural BMPs shall be included in the SWPPP. Generic SWPPPs that can be applied at multiple sites may be used to comply with this requirement. The SWPPP shall include periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMP.
- Maintain records of inspections and maintenance or repair activities conducted by the City in accordance with S9 Reporting Requirements of *Western Washington Phase II Municipal Stormwater Permit*.

5.2 Current Activities

- The City has adopted the *2009 King County Surface Water Design Manual (KCSWDM)* in February 2010, which includes the maintenance standard and requirements of drainage structures such as flow control, conveyance, and water quality.
- The City has adopted the *2009 Stormwater Pollution Prevention Manual (KCSPPM)* in August 2009, which includes Best Management Practices (BMPs) for Commercial, Multi-Family and Residential Properties.
- Inspecting both City and privately owned drainage facilities annually. The drainage structures and facilities include flow control, conveyance, and water quality.
- Documenting and maintaining all inspections and maintenance records or repair activities.
- Performing timely maintenance for City-owned drainage facilities, including flow control, conveyance, and water quality.
- Developing and implementing a long-term operation and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations

- Adoption of maintenance standards as or more protective of facility function than those specified in *KCSWDM*.
- Performing timely maintenance using Cityworks city asset maintenance system
- Implementing practices to reduce stormwater impacts associated with runoff from streets, parking lots, and roads maintained by the City
- Implementing policies and procedures to reduce pollutants in discharges from all land owned or maintained by the City, including parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control facilities

5.3 Planned Actions

- The City will continue to conduct spot checks and keep track of the records of potentially damaged permanent treatment and flow control stormwater facilities after major storms.
- The City will continue to inspect and keep track of all inspection records of City owned or operated catch basins at least once before the permit ends.
- The City will continue to develop, implement, and keep track of the development and implementation records of an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- The City will continue to implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated in the areas subject to this permit that are not required to have coverage under the General NPDES Permit for stormwater discharges Associated with Industrial Activities or another NPDES stormwater permit.